

United States Is World Leader in Tree Nut Production and Trade

by
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Abstract: Crops of all major U.S. tree nuts will be larger in 1997. However, beginning stocks of most tree nuts are below normal, which will moderate supplies. Prices, which were very strong last season, except for pecans, are expected to continue strong this season in spite of larger supplies. Quality of the U.S. crops is excellent this year and foreign supplies have moderated, which will further improve prospects for U.S. exports. A stronger U.S. domestic market is also likely this season. Acreage of most tree nuts is expected to increase for the next several years, which could lead to larger crops in the future.

Keywords: Tree nuts, production, exports, imports, stocks, marketing year

The United States leads the world in the production and export of tree nuts. The United States produces more than one-third of the total world output of tree nuts, followed by Turkey with about 25 percent (mostly hazelnuts), China 12 percent (mostly walnuts), and Iran with about 5 percent (mostly pistachios). The United States also commands about 40 percent of world tree nut exports. During the current marketing season, the U.S. share of world tree nut production and exports will increase due to a record U.S. output and smaller crops in competing countries for some nuts. In 1997, the United States will produce about 2.4 billion pounds of all tree nuts (in-shell basis) including the following and their approximate share of the total: almonds (57 percent), walnuts (19), pecans (13), pistachios (6), hazelnuts (3), and macadamia nuts (2).

Turkey, the world's second-largest tree nut producer, leads the world in output of hazelnuts and also produces significant quantities of walnuts, almonds, and other tree nuts. The United States ranks second behind China in walnut production and Iran in production of pistachios, but it produces the most almonds and pecans. For pistachios, the production pattern will be very different in 1997. The United States anticipates a record pistachio crop, while a small crop is expected in Iran due to a freeze during the bloom period. China matched the United States in walnut production in 1994, surpassed U.S. output in 1995, and continues to increase production. Similarly, the United States currently leads Australia in macadamia nut production, but Australian output is growing faster and will probably surpass U.S. production before 2000. The United States will remain the leading almond producer, typically accounting for 65-70 percent of the world total and four times as much as Spain, the second-largest almond producing country. The United States commands about 80 percent of total world almond exports.

Although world pecan production is not known, the United States is clearly the world's largest producer and ahead of

Mexico. The two countries probably provide for at least 90-95 percent of world production of this nut. Australia accounts for most of the remainder, but there is also minor production in some other countries such as Israel and South Africa. The U.S. crop is typically 2.5-3 times the size of the Mexican crop, but U.S. production varies considerably and Mexico's output continues to trend upwards. A substantial portion of U.S. pecan production consists of seedling and native pecans for which yields vary each year. Virtually all of Mexico's production consists of improved pecan varieties in well-managed orchards. New plantings have nearly ceased in Mexico. However, production will continue to climb as young trees mature, resulting in higher yields. Mexican growers are emphasizing chemicals, fertilizers, and other inputs needed for their existing trees and crops rather than planting additional acreage.

Major U.S. Tree Nut Markets Are EU, Asia, and Canada

The United States exported \$1.4 billion of all tree nuts or about 424,000 metric tons in 1996. More than one-half of all U.S. tree nut exports go to the European Union, where primary markets include Germany, Spain, the Netherlands, United Kingdom, France, and Italy. Other significant European markets are Belgium, Sweden, Denmark, and Switzerland. Latin America buys about 5 to 10 percent of all U.S. tree nut exports, with Mexico representing one-half of the export value to Latin America. Canada generates 10 to 15 percent of total purchases while Asia consumes about 25 percent of all U.S. tree nut exports. The major Asian market is Japan, which imports as much as Canada. Other important markets are South Korea, Hong Kong, Taiwan, India, and Israel.

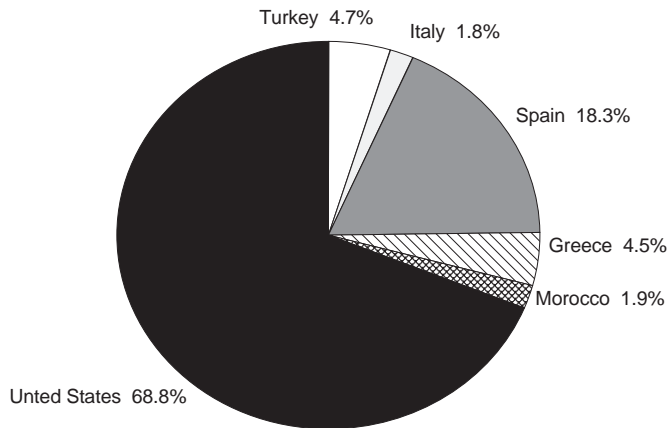
Exports Trend Higher While Consumption Plateaus

U.S. exports have varied over the past 5 years from 500 to 635 million pounds, shelled equivalent, and typically account for about 39 percent of the total available supply (production, stocks, and imports). This quantity is about twice the volume that was marketed in the early to mid-1980's.

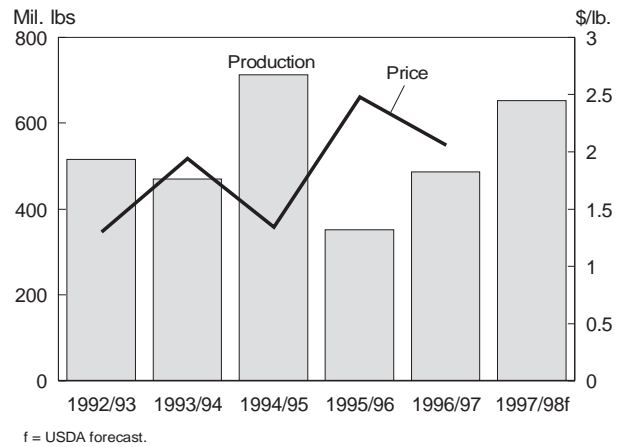
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Tree Nuts at a Glance

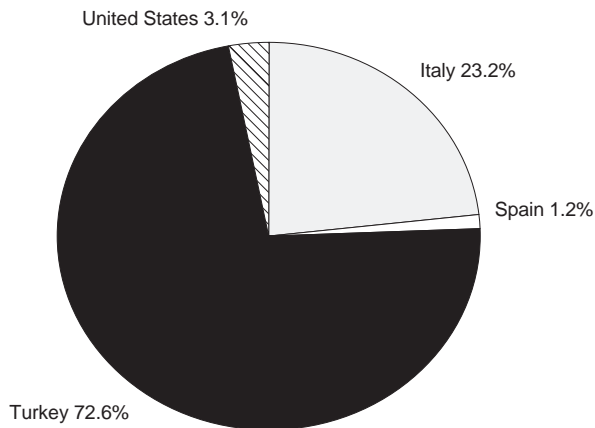
World Almond Production 1996/97



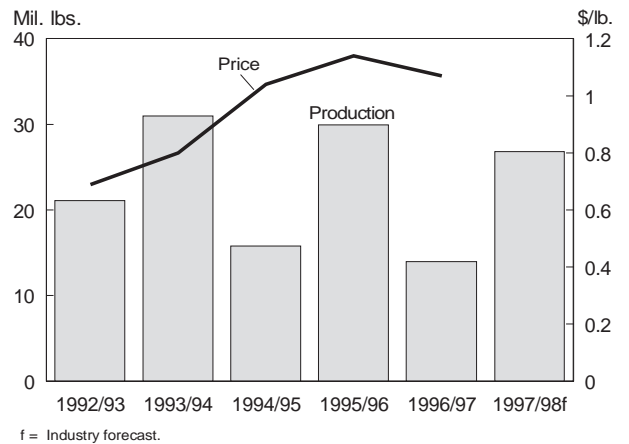
U. S. Almond Marketable Production and Grower Price (shelled basis)



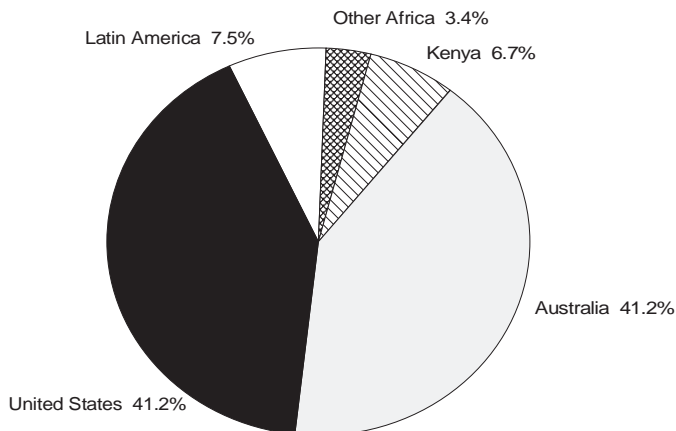
World Hazelnut Production 1996/97



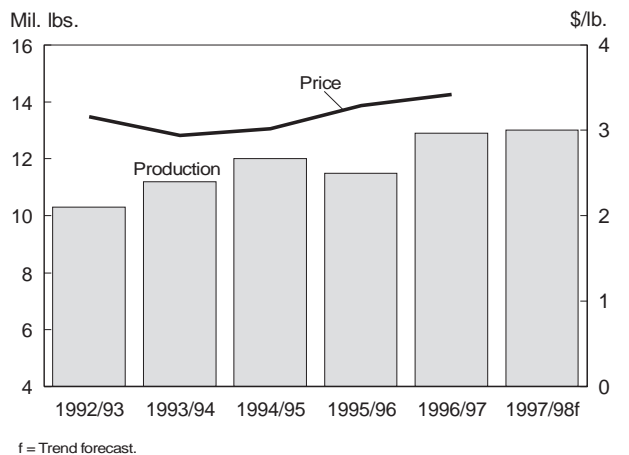
U. S. Hazelnut Marketable Production and Grower Price (shelled basis)



1996/97 Forecast Macadamia Production



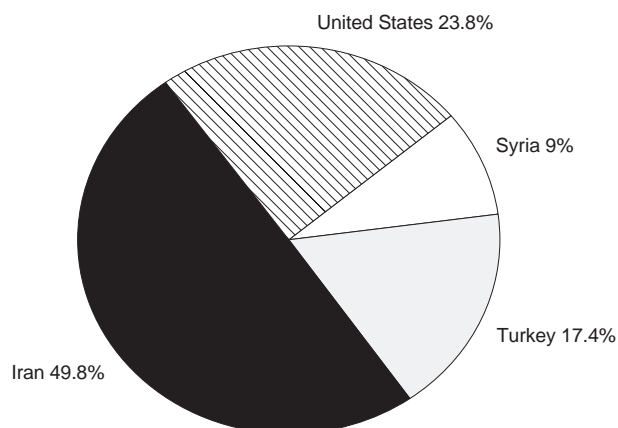
U. S. Macadamia Marketable Production and Grower Price (shelled basis)



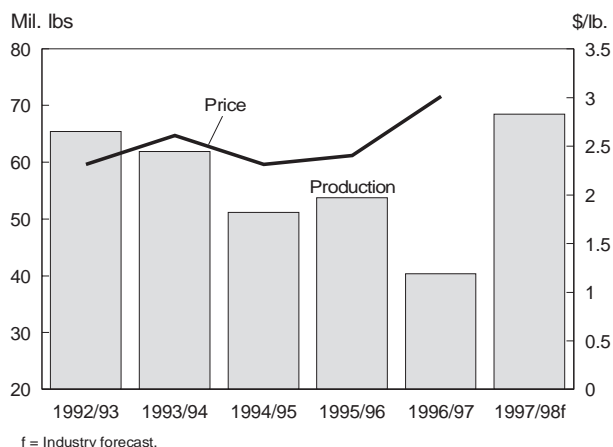
Source: International Tree Nut Council

Tree Nuts at a Glance

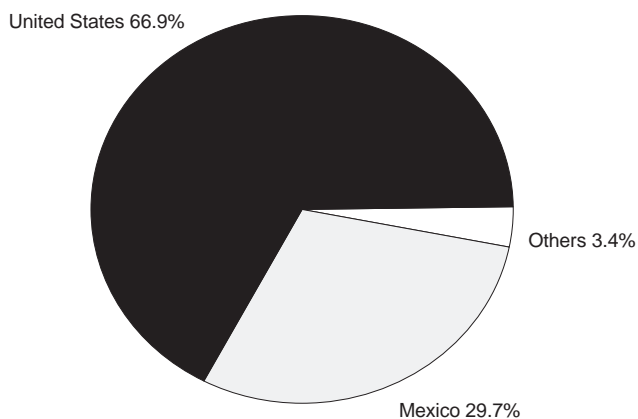
World Pistachio Production 1996/97



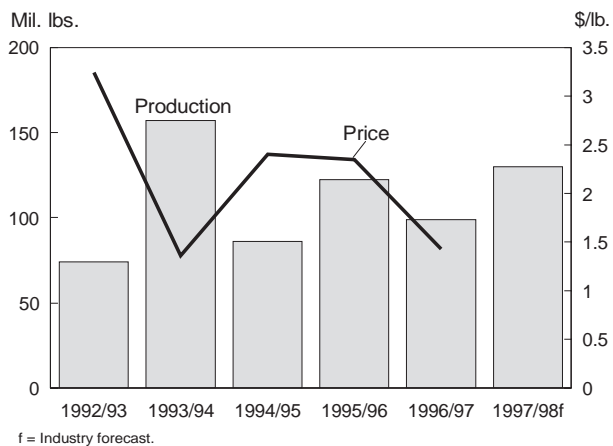
U. S. Pistachio Marketable Production and Grower Price (shelled basis)



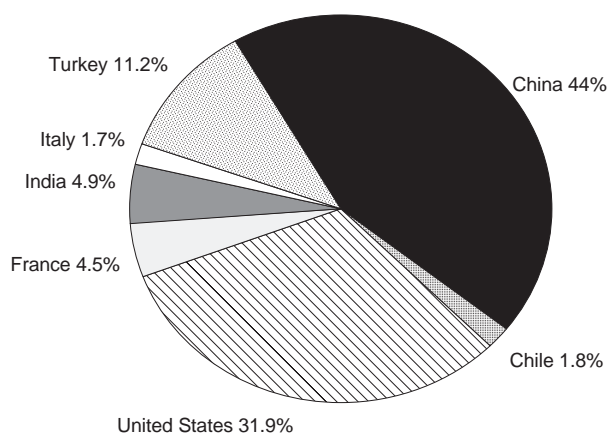
World Pecan Production 1996/97



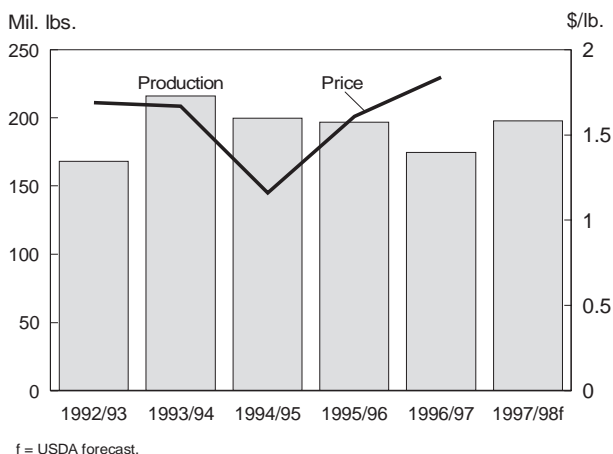
U. S. Pecan Marketable Production and Grower Price (shelled basis)



World Walnut Production 1996/97



U. S. Walnut Marketable Production and Grower Price (shelled basis)



Twenty years ago, domestic use accounted for 65-70 percent of the total tree nut disposition (domestic supply plus export). Prior to the mid-1980's, exports generally equaled one-half or less of domestic consumption. Marketing year 1991/92 proved the first time that U.S. exports exceeded domestic consumption, and this event occurred again in 1994/95. Within several years, exports could provide nearly two-thirds of total disposition, while domestic use accounts for the remainder.

This rapid growth in exports, especially since 1985, has made the export market increasingly important to the U.S. tree nut industry. For example, the value of almond exports for the 1995/96 marketing season (July 1-June 30) hit a record \$861 million and the 1996/97 marketing year will also be another "high-value" year, underpinning record cash receipts paid to growers. The 1997/98 season could exceed previous records. While domestic markets are still very substantial to U.S. tree nut growers, their relative importance when compared with export markets has fallen. Growth in domestic consumption has been approximately 1 percent yearly or about the same as population growth. Per capita consumption of all tree nuts in the United States has actually fallen during the past 3 years and now appears to be holding steady at about 2.2 pounds.

Almonds Account for 71 Percent Of U.S. Tree Nut Exports

Almonds represented more than \$1 billion (including prepared and preserved almonds) or 71 percent of all U.S. tree nut exports in 1996. Almonds remain one of the most important agricultural commodities exported, ranking in the top 10 behind beef, chicken, corn, soybeans, wheat, tobacco, cotton, and rice. Also, almond exports exceed all other fresh and prepared fruit and vegetable categories, including grapes and grape products (raisins, wine, etc.).

Seventy percent of almond exports enter Western European markets, with Germany being the major buyer (table A-1). Asia is the second most important market with 23 percent of the total. Japan typically purchases about one-half of U.S. almond exports to Asia. Even with higher prices into principal almond markets, U.S. exports increased substantially last year. U.S. exports to Western Europe during 1996 jumped 36 percent from the prior year and significant increases also occurred in Asia, especially South Korea, Hong Kong, and Taiwan. Higher shipments were also noted to Canada, Oceania, and Mexico. The expanded U.S. exports were demand-driven in spite of a larger world supply and exports last season. For the 1997/98 marketing year, world beginning stocks are very low. The higher expected almond production this season in many countries should not overburden world demand.

Since 1994, the U.S. almond industry has promoted almonds in China through USDA's Market Access Program (MAP) which has helped boost exports to Asia. Based upon a much larger supply this season, U.S. almond exports and domestic use during the 1997/98 season should rise substantially from the prior season. Other tree nut industries, such as walnuts, hazelnuts, and pistachios, have

also received MAP assistance to access markets and boost exports.

Most exported almonds are sold shelled to processors and bakers for manufacturing purposes, such as for almond paste (marzipan), but also as whole or sliced shelled almonds for the confectionary trade. European purchasers prefer whole or sliced shelled almonds. However, for the Middle Eastern countries like Israel and Saudi Arabia, and for many Mediterranean markets, almonds frequently are sold in-shell for traditional snack use by consumers. U.S. uses are very different than export uses. The Almond Board of California estimates U.S. domestic consumption of almonds by the following categories, in order of importance: candy (32 percent), cereal (10), snack nuts (10), ice cream (7), food service (7), in-shell (7), cookies and granola (3), baking (2), and all other uses (22 percent).

Walnuts Are Second in Tree Nut Exports

Sales of U.S. walnuts to foreign markets totaled more than \$201 million in 1996, 15 percent of the value of all U.S. tree nut exports. Principal markets for walnuts, shelled and unshelled, are comprised of the EU (mostly Germany, Spain, and Italy), Asia (mostly Japan), Israel, and Canada. Steady growth in demand for U.S. walnuts is the trend in European markets, while much stronger growth characterizes Asian markets. Walnut sales to Mexico declined in 1996, probably due to larger supplies of pecans and higher walnut prices.

Pistachio Exports To Jump in 1997

Pistachios are the third most important U.S. tree nut export. Principal markets include Asia, Europe, and Canada. Mexico's consumption is also significant and increasing. Hong Kong is the most important export market for pistachios, and Canada ranks second. Japan, Taiwan, and South Korea are also major markets. Germany, Belgium, and the United Kingdom are the principal European markets. USDA's Market Access Program has boosted export demand for U.S. pistachios by promoting in new and emerging markets. This strategy has also helped to boost overall pistachio demand and lift U.S. grower prices. An improved U.S. supply situation for the 1997/98 marketing year should increase exports. World supplies may not expand appreciably from last season because Iran's 1997 crop suffered serious frost damage, although the extent of the freeze damage is unknown. Typically, 1997 should be an "on-year" of the alternate-bearing cycle for both Iran and the United States, while 1996 was an "off-year" with both countries reporting below normal production. Because the United States will have a much larger proportion of the world supply, U.S. exports should increase substantially during the latter part of 1997 and first half of 1998.

Pecans Face Stiff International Competition From Other Nuts

Pecans rank fourth in value among U.S. tree nut exports. Canada is the primary market followed by Mexico. However, Mexico's imports are misleading, as perhaps one-half or more of the volume shipped across the border are in-shell pecans that will be cracked out and shipped back to

the United States. Other principal world pecan markets include the Netherlands, United Kingdom, France, Germany, and Israel. Much of the product shipped to Israel is in-shell for retail consumer use, while most of the European product is shelled and destined for manufacturing use. Export demand for pecans varies depending upon domestic prices and the available supply of competing nuts in international markets, especially walnuts and hazelnuts.

Hazelnut markets are similar to those for walnuts with major importers including Germany, Italy, Spain, Canada, Israel, other Asian markets, and Oceania (mostly Australia and New Zealand). Pecans are typically higher priced in wholesale markets than walnuts, hazelnuts, or almonds. When supplies are available, consumers and industrial users will select other nuts rather than pecans due to the price differential and much smaller availability of pecans. For the 1997/98 marketing season, supplies of nuts that compete with pecans are projected to increase, which will lower pecan demand.

Tree Nut Imports Equal One-Third of Exports

Most U.S. tree nut imports are cashews and Brazil nuts, which the United States does not produce because they are grown in the tropical climates. Last year cashew imports were \$301 million. U.S. tree nut imports in 1996 totaled \$536 million (including coconut meats), about one-third the value of exports (table A-2). Although imports of hazelnuts, pecans, and pistachios are less than exports, their volume and value are still substantial and add to the total supply. Most of the imported pecans are grown in Mexico, but some are U.S. pecans processed in Mexico and returned to the U.S. market. The United States also imports substantial amounts of macadamia nuts (mostly from Australia, but also Central America and Africa), Brazil nuts from South America, chestnuts (mostly Italy), and pignolia nuts (mostly China). Imports of almonds, walnuts, and other tree nuts are minor.

Use of Tree Nuts Is Changing

While a larger portion of the total U.S. tree nut supply is being exported (both for shelled and in-shell product), a higher proportion of most tree nuts is also being sold shelled. This development primarily reflects greater demand from manufacturers in the United States and abroad who seek more convenience. Industry reports indicate that confectioners and cereal manufacturers are taking a larger portion of the almond and hazelnut distribution, while baking use may be decreasing. Bakers and ice cream manufacturers still take a big share of the walnut and pecan distributions for processors, but cereal use of these nuts has also increased. Cereal manufacturers are now using tree nuts in new hot and cold cereal products.

Studies of U.S. consumer snacking behavior reveal that consumption of snack foods is at record levels and rising. Data from the 1996 Snack Food Association's *Consumer Snacking Behavior Report* shows total per capita U.S. snack consumption at 21.7 pounds and snack nuts at 1.6 pounds. Snack nuts account for 9 percent of the total snack market volume (5.69 billion pounds) or 7 percent of the total retail dollar sales (\$15.05 billion).

In comparison to snack use in the United States, snacking in Europe remains very low. For example, in 1994 estimated snack consumption in Germany reached 5.1 pounds per capita, while consumption in other EU countries ranged from a low of 2.2 pounds in Italy to a high of 11.5 pounds per capita in United Kingdom. U.S. snack exports are increasing rapidly, rising almost 50 percent from \$592 million in 1991 to \$885 million in 1994. Recent trends in the U.S. snack industry indicate strong growth in reduced-fat, low-fat, and no-fat snacks. This snack category increased 20 percent in 1994 from the previous year and is the fastest growing segment of the snack food industry. Data are not available to indicate the share of tree nuts or nuts in general of this market.

Table A-1--U.S. tree nut exports: Major world markets, 1996

Region and country	Almonds	Hazelnuts	Pistachios	Walnuts	Pecans	Other 1/	Total
Value (\$ 1,000)							
Canada	41,474	1,820	8,193	12,597	18,463	8,458	91,005
Latin America	15,135	2,401	5,026	9,413	11,599	8,012	51,586
Mexico	8,390	397	1,361	649	11,522	779	23,098
Other 2/	6,745	2,004	3,665	8,764	77	7,233	28,488
W. Europe	700,535	11,439	14,434	118,858	15,787	16,925	877,978
Sweden	19,018	0	176	954	302	6	20,456
Denmark	19,508	0	0	795	12	52	20,367
United Kingdom	67,726	973	1,029	4,818	3,929	2,249	80,724
Netherlands	66,994	0	784	15,440	6,713	6,564	96,495
Belgium	27,605	0	3,033	813	109	699	32,259
France	73,660	349	356	709	2,086	1,772	78,932
Germany	243,980	6,436	7,892	28,462	2,156	1,748	290,674
Spain	99,669	1,533	0	34,327	214	1,187	136,930
Italy	34,026	2,050	78	24,416	168	727	61,465
Norway	8,266	25	210	1,671	97	1,200	11,469
Switzerland	20,668	0	875	1,407	0	508	23,458
Other 3/	19,415	73	1	5,046	1	213	24,749
Other Europe 4/	4,964	0	3,540	32	0	1,635	10,171
Asia	234,688	4,705	50,213	54,181	3,473	20,567	367,827
Israel	11,562	1,316	528	10,390	2,092	1,106	26,994
India	25,670	0	0	0	0	98	25,768
Japan	110,147	14	5,401	38,083	645	11,126	165,416
Korea	15,686	0	3,139	2,330	405	760	22,320
Hong Kong	15,074	853	29,066	294	173	3,546	49,006
Taiwan	13,295	19	4,290	2,637	48	1,212	21,501
Other 5/	43,254	2,503	7,789	447	110	2,719	56,822
Oceania 6/	13,198	1,361	3,932	5,630	457	787	25,365
Africa	5,900	285	285	661	3	230	7,364
World total	1,015,894	22,011	85,623	201,373	49,781	56,614	1,431,296

1/ Brazil nuts, cashews, pignolias, pine nuts, etc.

2/ Central America, Caribbean, and South America.

3/ Finland, Ireland, Austria, Portugal, Greece, Iceland, Gibraltar, and Malta Gozo.

4/ Eastern Europe including Hungary, Poland, Romania, Former Czechoslovakia, Former Yugoslavia, Bulgaria, Former Soviet Union including Russia, Ukraine, etc.

5/ Western Asia (Middle East), Southern Asia, China, and Southeast Asia.

6/ Australia, New Zealand, French Pacific Island, and other Pacific Rim islands.

Source: Foreign Agricultural Trade of the United States, FATUS, Calendar Year 1996 Supplement, USDA/ERS, July, 1997.

Table A-2--U.S. tree nut imports: Major world suppliers, 1996

Region and country	Brazil nuts	Cashews	Chestnuts	Coconut meat	Hazelnuts	Macadamias	Pecans	Pistachios	Other 1/	Total
Value (\$ 1,000)										
Canada	6	52	0	1,631	153	0	0	4	23,776	25,622
Latin America	19,518	127,593	18	12,415	0	6,446	42,501	0	5,965	214,456
Mexico	0	0	0	1,424	0	39	42,433	0	731	44,627
Guatemala	0	254	0	0	0	3,523	0	0	103	3,880
Costa Rica	0	0	0	753	0	2,035	0	0	0	2,788
Dominican Rep.	0	2	0	10,063	0	0	0	0	4	10,069
Peru	3,013	51	0	0	0	0	68	0	29	3,161
Bolivia	8,298	106	0	0	0	0	0	0	0	8,404
Chile	1,083	134	0	18	0	0	0	0	0	1,235
Brazil	7,019	126,657	0	3	0	817	0	0	17	134,513
Argentina	0	0	18	0	0	0	0	0	5,074	5,092
Other 2/	105	389	0	154	0	32	0	0	7	687
W. Europe	53	175	9,319	232	620	108	0	41	2,692	13,240
Spain	0	67	243	0	0	0	0	0	960	1,270
Italy	0	0	8,700	0	255	0	0	30	221	9,206
Other 3/	53	108	376	232	365	108	0	11	1,511	2,764
Other Europe 4/	0	0	0	0	0	0	0	0	0	0
Asia	0	157,859	1,244	49,878	13,683	218	54	1,396	24,149	248,481
Turkey	0	90	43	0	13,627	0	0	1,233	429	15,422
India	0	146,417	0	3	55	0	0	0	1,033	147,508
China	0	1,018	228	42	0	215	0	53	18,898	20,454
Thailand	0	52	0	5,372	0	0	0	0	52	5,476
Vietnam	0	7,791	0	32	0	0	0	0	72	7,895
Singapore	0	904	0	51	0	0	0	0	282	1,237
Indonesia	0	1,212	0	579	0	0	0	0	59	1,850
Philippines	0	3	0	41,950	0	0	0	0	188	42,141
Korea	0	0	897	0	0	0	0	4	234	1,135
Hong Kong	0	37	60	23	0	0	0	9	1,309	1,438
Other 5/	0	335	16	1,826	1	3	54	97	1,593	3,925
Oceania	0	17	0	0	0	10,524	1,262	0	103	11,906
Australia	0	17	0	0	0	10,524	1,262	0	103	11,906
Other 6/	0	0	0	0	0	0	0	0	0	0
Africa	0	15,445	0	8	0	6,310	0	100	83	21,946
Kenya	0	2,029	0	0	0	2,415	0	0	0	4,444
Mozambique	0	12,722	0	0	0	0	0	100	0	12,822
Rep. S. Africa	0	536	0	0	0	2,312	0	0	0	2,848
Malawi	0	0	0	0	0	1,398	0	0	0	1,398
Other	0	158	0	8	0	185	0	0	83	434
World total	19,576	301,141	10,581	64,163	14,455	23,606	43,817	1,542	56,769	535,650

1/ Almonds, walnuts, pignolias, etc.

2/ Other Central America, Caribbean, and South America.

3/ Germany, France, United Kingdom, Scandinavia, Switzerland, Ireland, Austria, Portugal, Greece, Iceland, Gibraltar, and Malta Gozo.

4/ Eastern Europe including Hungary, Poland, Romania, Former Czechoslovakia, Former Yugoslavia, Bulgaria, Former Soviet Union including Russia, Ukraine, etc.

5/ Western Asia (Middle East), Southern Asia, China, and Southeast Asia.

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Source: Foreign Agricultural Trade of the United States, FATUS, Calendar Year 1996 Supplement, USDA/ERS, July, 1997.